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MAY 10 1993

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Before  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

In the Matter of )  
)  
Replacement of Part 90 by )  
Part 88 to Revise the Private )  
Land Mobile Radio Services and )  
Modify the Policies Governing )  
Them )

PR Docket 92-235

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MAY 11 1993

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

## COMMENTS OF

## THE SHASTA AREA SAFETY COMMUNICATIONS AGENCY

Redding, California

1. **Responder.** The Shasta Area Safety Communications Agency (SHASCOM) is a Joint Exercise of Powers Agency, as a separate public entity, pursuant to Chapter 5, Article 1, commencing with Section 6500 et seq. of the California Government Code. SHASCOM was formed as a public safety support agency by the County of Shasta and the Cities of Redding and Anderson, California to provide: (1) dispatch services for law enforcement, fire and rescue services within the jurisdictions of the participating agencies, (2) a 9-1-1 public safety answering point, and (3) to engineer, install, provide service, maintain and repair microwave systems, and ground-based and mobile radio systems in connection therewith.

2. **Location.** Shasta County is a 3,850 square mile rural, mountainous County, at the north end of the Sacramento Valley. It sits astride the Sacramento River and Interstate 5, midway between Sacramento, California and Medford, Oregon. The County Seat is the incorporated city of Redding with a current permanent population of 70,000 persons. The second incorporated city is Anderson with a population of 8,000 persons. The remaining 55,000 persons of the County's total of 153,000 are located in many small rural communities in the mountainous areas of the County. Shasta County has an extremely large retiree population with limited income.

3. **Summer Population.** Shasta County is also the heart of Northern California's recreation area. The Sacramento River splits the west side of the County in half and is a major fishing and boating area. Shasta County is also the home of the Shasta-Trinity National Forest, Whiskeytown-Shasta-Trinity National Recreation Area, Mount Lassen Volcanic National Park, numerous State parks and recreation areas, Lake Shasta, Whiskeytown Lake and the Pit and McCloud Rivers. During the summer months, the

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County population more than triples placing an extreme burden on its public safety services. On any given summer day, the mountainous areas of this County have as many people in them as do many moderate sized cities.

4. **Rural Counties.** This Docket provides badly needed frequency relief for the metropolitan areas of the United States, but destroys effective public safety communications in the rural mountainous areas. Rural counties have neither the funding nor the means to make the drastic changes that would be required should this Docket be implemented in its current state. The Commission is urged to consider the effect this Docket will have in all our rural areas, and especially the rural mountainous areas of the West. It is in these rural environments that public safety communications is the life-line to "Rural America" and its citizens. It should be noted that within California, the rural counties cover the majority of the State's land mass.

5. **Shasta County's Radio Systems Are Typical of Rural Counties.** Shasta County's 3,850 square miles are mostly mountainous except in the Redding and Anderson areas along Interstate 5. The average county terrain is between 4,000 and 7,000 feet above mean sea level with some mountain tops over 10,000 feet in elevation. The Sheriff uses a VHF Repeater (Mobile Relay) system to provide reasonable coverage throughout the County. This system consists of four repeater sites located on mountain tops at elevations of 3,946, 5,189, 5,500 and 8,169 feet AMSL. The latter site, near Mt. Lassen Volcanic National Park is accessible only during the summer and operates with solar panels for power. The County's Road Department radio system also uses three of these sites and their Local Government radio system uses two of the sites. These are typical of county radio systems throughout California's rural counties.

6. **County-wide EMS Radio System is Typical of California's Non-Metropolitan Areas.** The County-wide Emergency Medical Radio System operating on MED 1 through 10 uses a Repeater System with six mountain-top sites ranging from 3,900 to 8,200 feet AMSL. Again, for the coverage required. This system provides the only means of emergency medical communications between local volunteer EMTs at the scene and the medical facilities. Land-based paramedic units are as much as two hours away in some parts of the County. Even with this extensive system, coverage is marginal at best in some remote areas. This system is typical of most California EMS radio systems outside the major metropolitan areas.

7. **The Proposed Docket is Not Compatible with Rural Areas.** The rural areas desire to cooperate fully in establishing additional spectrum, but what maybe applicable to most of the United States is not applicable to the rural mountainous counties, especially when they overlook flat populated areas, such as is common in California. Rural counties in the mountainous areas of the Western United States have no feasible site alternatives, except to use mountain-top sites in order to provide the necessary wide-area coverage in deep canyons where small settlements, parks and other

recreational areas exist. It would cost millions, and bankrupt the counties, regional and state agencies to attempt to install low level sites to cover mountainous areas.

8. **Inter-Operability.** California has more than its share of major forest fires, earthquakes, flooding and similar disasters. The rural counties, after years of struggling, have finally reached a level of true inter-operability between its public safety users at the city, county, state and federal levels. This has been accomplished, in Northern California because those entities all operate in the VHF radio spectrum. Through contractual agreements and FCC recognition of inter-operability, this system operates as well, if not better, than the five channels provided in the 800 MHz National Plan. A large number of channels are available because of the pooling during major disasters and fires and it is currently in place.

9. **Inter-Operability Components.** Within Shasta County all public safety entities, except the Redding Police operate on VHF. These include the Sheriff and Anderson Police; the volunteer County Fire Department and fire districts; the County Road Department, their water trucks and dozer transports; the California Department of Forestry and Fire Protection, Department of Fish and Game, Bureau of Narcotic Enforcement and the emergency units of the Governor's Office of Emergency Services; and, the United States Forest Service, National Park Service and the Bureau of Land Management. Similar functions in all surrounding counties also operate on VHF and have inter-operability. During times of disaster, fires and major law enforcement operations; inter-operability is required. The 64,000 acre Shasta County Fountain Fire in 1992, which destroyed over 300 hundred structures, would have had a very high cost in lives and property, were it not for the inter-operability currently available.

10. **Loss of Inter-Operability.** During any cut-over period to new technical requirements, this inter-operability will be lost until all participants make the change. A much more serious problem, however, is that unless the Federal Agencies also follow suit in complying with the technical requirements of this Docket, inter-operability will be lost. The fact that the US Forest Service and the National Park Service are able to have inter-operability with the State and county forces may be of no concern to the metropolitan areas, but it is of serious major concern to the rural areas of California. This is a condition that can and will probably lead to increased property and human loss as a result of the total destruction of rural inter-operability. When Federal, State and local fire crews are working together on major wildland fires, as an example, and cannot communicate with one another on the fireline because their radios must meet different technical parameters within the same frequency band; we have somehow lost track of what our primary purpose is, **the safety of life and property**.

11. **Objection to Power Limitation.** This Agency objects to the blanket proposal to severely limit power output of base stations as a condition of elevation in order to reuse channels within 50 miles. This maybe an applicable solution to a flat

metropolitan area, but not to mountainous areas. The proposed solution recommended is to increase the number of low level, low power stations to provide the needed coverage. The Agency questions the rational for such a recommendation in mountainous terrain. To duplicate existing coverage, as recommended, over a 3,850 square mile mountainous County by using low-power, low-level sites defies definition. Reduction of power to as low as ten watts on a 8,100 foot mountain top is still going to produce a usable signal over a long distance, but at the same time will eliminate local coverage where it is required. Three hundred watts of patterned ERP may well continue to provide the necessary radio coverage, but, it too, will make the frequency unusable over very wide distances. *This presents a serious dichotomy that must be successfully resolved before finalization of this Docket.*

**12. Objection to Modulation Reduction.** The Agency further objects to the reduction in modulation that will degrade system performance by lowering the signal-to-noise ratio. Twenty to 30 percent of rural radio communications, even through mountain top repeaters, are already marginal and mixed with noise because of terrain paths from the mobiles. Modulation reduction will effectively eliminate those transmissions. It will create a very serious safety and communications issue for the law enforcement, fire and medical personnel involved.

**13. Objection to Short Effective Date.** The Agency objects to the short effective date, January 1, 1996, to make the technical changes required. This forces public entities to replace most older equipment since it cannot be modified to meet the new standards. Most rural counties and their cities do not have the funds to accomplish this. They do not even possess the funds to maintain their own public safety services at acceptable levels. Every public entity within Shasta County made extensive budget reductions for fiscal 1992/93. This resulted in layoffs of many positions including deputy sheriffs and police officers. They will be required to make further deep cuts in fiscal 1993/94. The need to replace radio equipment not meeting the new technical standards could eliminate all non-law enforcement radio systems within Shasta and other rural counties. Most street, road and other local government functions mostly operate with older equipment. Available funding in normal budget years is used to keep their law-enforcement radio systems in use with reliable equipment. Due to total lack of additional funding, those systems could not be replaced, contrary to expectations. This will also remove radio equipment from volunteer fire departments across the area, since most rely on older radio equipment to function. Shasta County has 32 volunteer fire companies or departments.

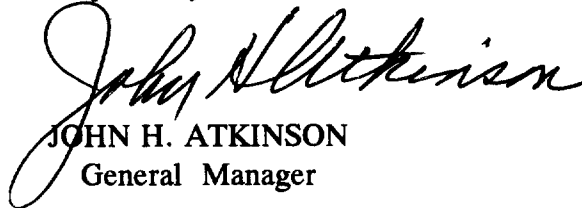
**14. Objection to Elimination of Service Blocks in the Absence of Frequency Coordination Re-Structuring.** This Agency objects to the elimination of service blocks within the public safety radio services unless major re-structuring of the frequency coordination process takes place. Not all public safety coordination committees operate in the same manner. APCO uses local coordinators to assist the National coordinator. The Fire Service, at least in California does not. This lack of

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local coordination, if applied to the police and local government radio assignments would create absolute havoc among public safety users because of the terrain problems previously discussed. The fact that California has been able to operate in such a volatile radio environment in police and local government can only be attributed to the local committee input. To inter-space private and commercial users within Public Safety would be a disaster to public safety. If interference occurs, one department can talk to another at the professional level. With private and commercial users, time and extensive Commission resources would be required on almost every problem, while damage continues to the public safety operations.

15. **Agency Recommendation.** The Agency respectfully urges the Commission not to adopt this Docket until the concerns of the rural areas have also been satisfactorily resolved.

Respectfully submitted,



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